

Multimedia Resources





FIRST[®] LEGO[®] League Discover

Multimedia Resources

Below is a session-by-session list of Multimedia Resources for this season. These resources include links to websites, videos, building instructions, and other online tools related to the content of each session.

Some of the resources below are from third-party sites not developed or managed by *FIRST*[®] or LEGO[®] Education, but they're too great not to share!

You could share resources during sessions and/or encourage your students to explore them between sessions (with permission and supervision from a parent or guardian).

	General Resources	
Support from LEGO Education	<u>Class Pack- <i>FIRST</i> LEGO</u> <u>League Discover</u>	<u>FIRST LEGO League</u> (global)
Email for General Support	<u>Teamwork Makes the</u> <u>Dream Work <i>FIRST</i> LEGO League Music Video</u>	FIRST LEGO League (US)

Professional Development and Training Resources

Hybrid & Remote Learning Resources (for PLAYMAKERS season)

- Hybrid & Remote Learning Resources from FIRST
 - o FIRST LEGO League Discover Teacher Guide for Distance Education
 - o Letter for School Administrators
 - o <u>Teaching Core Content through Discover</u>
 - o STEAM Park Inventory for Remote Learning
- Hybrid & Remote Learning Resources from LEGO Education

FIRST Resources

- FIRST Certified Professional Development
- FIRST Education Philosophy
- FIRST LEGO League Discover Scope and Sequence Options

 10 hours / 20 hours / 25 hours / 35 hours
- Discover Skills Progression student learning outcomes by grade level
- <u>Standards Alignments</u> for *FIRST* LEGO League Discover
- FIRST Equity, Diversity, and Inclusion Training
- FIRST Equity, Diversity, and Inclusion Video Playlist
- FIRST Impact





Additional Professional Development Resources and Research

- What is Computational Thinking?
- How Play Connects to Learning from NAEYC
- Playtime Matters Research Report from Outdoor Play and Learning

Family Engagement

- FIRST Family Engagement Resources
- LEGO Education Let's Build Together
- Articles for Families on Play from NAEYC

LEGO Education & LEGO Foundation Resources

General LEGO Resources

- Learning Through Play
- LEGO Education Teacher Community
- Self-Guided Professional Development from LEGO Education
- LEGO Foundation's Research Knowledge Base
- Buying Replacement Parts

LEGO Education STEAM Park Resources

- <u>STEAM Park Teacher Guide</u> We suggest pre-teaching the <u>Functional</u> <u>Elements</u>, <u>Welcome to STEAM Park</u>, and <u>Gears</u> lessons before beginning the Discover sessions.
- Bringing STEAM to Life in Preschool Classrooms Video from LEGO Education
- STEAM Park Element List
- STEAM Park Product Support
- STEAM Park Animations
 - o Welcome to STEAM Park
 - o STEAM Park Animation 2
 - o STEAM Park Animation 3
 - o STEAM Park Animation 4

Six Bricks

- LEGO Foundation Six Bricks
 Booklet
- Six Bricks Activity Cards
- <u>Six Bricks videos (Greenmouse</u> <u>Academy)</u>
- Six Bricks videos (IET)

- o STEAM Park Animation 5
- o STEAM Park Animation 6
 - o STEAM Park Animation 7
 - o STEAM Park Animation 8
 - <u>Six Brick videos (Care For</u> <u>Education)</u>
 - <u>Getting Started with FLL Discover –</u> <u>Six Bricks video</u>
 - Six Bricks Books
 - Letters and Numbers with Six Bricks





Pre-Session Resources

FIRST LEGO League Discover

- About FIRST LEGO League flyer
- FIRST LEGO League Discover: How It Works
- Getting Started with FIRST LEGO League Discover video

CARGO CONNECTSM General Season Resources

- FIRST LEGO League Discover CARGO CONNECT Informational Video Playlist
 - Discover Introduction: Materials and Guidebooks
 - Discover Set: Unboxing
 - Discover Set: Storage

• Discover Set: Destinations

• Discover Set: Sorting Center

Discover Set: Mat

• Discover Set: Truck

- CARGO CONNECT season resources page (includes student certificates)
 - Discover Overview
 - o Discover Introduction
 - Building Cards 1
- Season Videos
 - CARGO CONNECT Season Launch
 - CARGO CONNECT Season Teaser
 - CARGO CONNECT Discover Set
- FIRST FORWARD and CARGO CONNECT season content (Logos to use in flyers, emails, or other resources you may wish to create)
- CARGO CONNECT Team Meeting Guide, Engineering Notebook and Individual Session PowerPoint Slides (Google Slides version)
 - Found on Thinkscape through your FIRST Dashboard for US/CAN or 0 through your country's Program Delivery Partner.

CARGO CONNECT Discover Session Resources

Session 1: Let's Discover

Discover Six Bricks I	Video from <i>FIRST</i> LEGO League Discover facilitator
Functional Elements lesson	STEAM Park lesson

- Building Cards 2
- o Building Cards 3

- CB	Transportation with Zoe Saldana	From Sesame Street – Length 2:00
	Discover More Game	Handout to send home with students
AL MAR	Henry Ford Museum	Virtual Field Trip for students
WWW	Supply Chain Modes of Transportation	Background information for teachers from Blume Global
	Late for School! by Stephanie Calmenson	Fiction Book
	National Geographic Little Kids First Big Book of Things That Go by Karen De Seve	Non-Fiction Book
	Transportation in Many Cultures (Life Around the World) by Martha Elizabeth Hillman Rustad	Non-Fiction Book
Aa	destination, function, transportation	Vocabulary definitions from Merriam- Webster Learner's Dictionary

Session 2: Let's Deliver

	Discover Six Bricks II	Video from <i>FIRST</i> LEGO League Discover facilitator
C	Modes of Transport	From Learning Junction – Length 3:44
WWW	Transportation Information from BrainPOP	Background Information for teachers
WWW	New York Transit Museum	Remote learning resources including virtual field trips
WWW	Let's Move: Identifying Modes of Transportation	Extension activity teacher lesson plan from Education.com
	Cars and Trucks and Things That Go by Richard Scarry	Fiction Book
	Cars, Trains, Ships, and Planes: A Visual Encyclopedia of Every Vehicle by DK	Non-Fiction Book
Aa	form, journey, packages	Vocabulary definitions from Merriam- Webster Learner's Dictionary





Session 3: Let's Transport

	Six Bricks: What Can You Build?	Video from <i>FIRST</i> LEGO League Discover facilitator
Co-	Journey of a Parcel	From the New Zealand Post – Length 4:06
Co-	How Amazon Delivers Packages So Fast	From Tech Vision – Length 5:18.
WWW	Transportation	Background information from Britannica Kids
6	Curious George's Busy Day Counting Trains Game	Interactive game from PBS Kids for students
	The Giant Hug by Sandra Horning	Fiction Book
	Mail Truck's Busy Day by Traci Todd Peyton	Fiction Book
	A Trip to the Post Office by Josie Keogh	Non-Fiction Book
Aa	<u>cargo, load, unload</u>	Vocabulary definitions from Merriam- Webster Learner's Dictionary

Session 4: Let's Sort

	Six Bricks: Cargo Space	Video from <i>FIRST</i> LEGO League Discover facilitator
Co-	Inside Australia Post's High Tech Parcel Sorting Facility	From 7News Australia – Length 1:30
WWW	The Hidden Toll of Shipping	Background information for teachers from Gizmodo
WWW	Ten Transportation Activities for Kids	Extension activity ideas for teachers from kinderart.com
11/11	<u>Going to Work by Bus Coloring</u> Page	Downloadable PDF from LEGO Education
NY -	Never Mail an Elephant by Mike Thaler	Fiction Book







Whose Vehicle is this?: A Look at Vehicles Workers Drive Fast, Loud, and Bright by Sharon Katz Cooper

Non-Fiction Book

access, sort, sorting center

Vocabulary definitions from Merriam-Webster Learner's Dictionary

Session 5: Let's Innovate

	Six Bricks: Cargo Train	Video from <i>FIRST</i> LEGO League Discover facilitator
	Ford's Delivery Robot Walks on Two Legs Like a Human	From Tech Insider – Length 3:00
ALMAN	<u>Containers Shipping Prices</u> <u>Skyrocket as Rush to Move Goods</u> <u>Picks Up</u>	Background information for teachers from the Wall Street Journal
WWW	How Transportation Transformed America: Going to Market Lesson	Extension activity lesson plan from the US Library of Congress
11/11	Postal Worker Delivery Mail Coloring Page	Downloadable PDF from LEGO Education
LL)	The Little Engine that Could by Watty Piper	Fiction Book
LL)	Transportation (Around the World) by Margaret Hall	Non-Fiction Book
Aa	<u>functional, innovative, vehicle</u>	Vocabulary definitions from Merriam- Webster Learner's Dictionary

Session 6: Let's Explore Jobs

	Six Bricks: Moving Packages	Video from <i>FIRST</i> LEGO League Discover facilitator
	I Want to be a Mail Carrier	From Can You Imagine That – Length 5:01
WWW	Transportation Modes	Background information from the Geography of Transport Systems
WWW	Community Helper Matching Game	Downloadable PDF from Junior Achievement
WWW	Community Helper Resources	Resources for parents from PBS





NY
NY>
Aa

If I Built a Car by Chris Van Dusen	Fiction Book
Mail Carriers at Work by Karen Kenney	Non-Fiction Book
Diary of a Pilot by Angela Royston	Non-Fiction Book
<u>community, job, tool</u>	Vocabulary definitions from Merriam- Webster Learner's Dictionary

Session 7: Let's Use Ramps

	Six Bricks: Build a Picture	Video from <i>FIRST</i> LEGO League Discover facilitator
	Ramps lesson	STEAM Park lesson
	Ramps: A Super, Simple Machine	From SciShow Kids – Length 4:08
WWW	Curious George Ramp-n-Roll	Lesson Plan for teachers from PBS
WWW	Explore Ramps	Extension activity unit plan from Peep and the Big Wide World.
LL)	Mama Zooms by Jane Cowen- Fletcher	Fiction Book
	Curious George Goes Bowling by H. A. Rey	Fiction Book
NY>	Roll, Slope, and Slide: A Book About Ramps by Michael Dahl	Non-Fiction Book
	Ramps and Wedges (How Toys Work) by Sian Smith	Non-Fiction Book
Aa	<u>gravity</u> , <u>ramp</u> , <u>speed</u>	Vocabulary definitions from Merriam- Webster Learner's Dictionary





Session 8: Let's Improve

	Six Bricks: Air and Water	Video from <i>FIRST</i> LEGO League Discover facilitator
	Tracking for Priority Shipping	From United States Postal Service – Length 1:26
NAMMA.	Carl Gets Some Rest: A Coloring and Story Book	A downloadable coloring book from the US Environmental Protection Agency
6	Cat in the Hat Marbleous Marble	Interactive game from PBS Kids for students
ININ	Train and Conductor Coloring Page	Downloadable PDF from LEGO Education
NY	Brave Irene by William Steig	Fiction Book
NY -	Rosie Revere, Engineer by Andrea Beaty	Fiction Book
Aa	delivery, efficient, improve	Vocabulary definitions from Merriam- Webster Learner's Dictionary

Session 9: Let's Connect

	Six Bricks: Build a Bridge	Video from <i>FIRST</i> LEGO League Discover facilitator
(B)	Journey of your Online Order	From Amazon India – Length 4:14
	<u>The Cat in the Hat Bridge-a-Rama</u> <u>Game</u>	Interactive game from PBS Kids
•	Cyberchase Railway Hero Game	Interactive game from PBS Kids
ININ	Train and Engineer Coloring Page	Downloadable PDF from Crayola
LL)	Mine! by Jerome Keane	Fiction Book
	The Squirrels who Squabbled by Rachel Bright	Fiction Book







Aa

Fiction Book

Vocabulary definitions from Merriam-Webster Learner's Dictionary

Session 10: Let's Celebrate

	CARGO CONNECT Season Launch	
	Video	
WWW	Discover Certificates	Printable certificates to provide to the children
LL)	Rex Wrecks It! by Ben Clanton	Fiction Book
LL)	Going Places – by Paul and Peter Reynolds	Fiction Book

Additional Resources

General Career Resources

- Visit the <u>Learning Lab</u> and search careers from A-Z (PBS LearningMedia)
- Amazon Future Engineer Class Chat
- <u>Career One Stop Pathways to Career Success</u> (US Dept. of Labor)
- <u>O*NET OnLine</u> (US Dept. of Labor)
- <u>O*NET Interest Profiler</u> (US Dept. of Labor)
- <u>Career Exploration Lesson Plans</u> (Nebraska Department of Education)

Transportation Career Resources

- <u>Transportation & Logistics Careers</u> (Amazon)
- <u>New Robots, New Jobs (</u>Amazon)
- <u>Career Videos for Transportation, Distribution and Logistics (US Dept. of Labor)</u>
- Transportation, Distribution, and Logistics Careers (Minnesota State University)
- <u>Transportation Career Lesson Plans</u> (Northeast Transportation Workforce Center)





Extension Activity Resources

- <u>FIRST@Home-</u> These free activities supplement the *FIRST* season materials with opportunities for STEM skill development using LEGO and other readily available materials. They can be completed at home by students and their families or in the classroom.
- <u>12-Session Discover STEM Activity Series Mid-America Transportation Center</u> <u>Teacher Resource Center- Lesson Plans</u>
- <u>Transportation Activities and Videos</u> (PBS Design Squad)
- Moving Cargo- Transportation Educator Guide (NASA)
- Exploration: Then and Now Transportation Lesson (NASA)
- Transport, Past and Present (US Mint)
- Let's Get There Fast (Teach Engineering)
- Port: A Transportation System Classroom Resources
- Shipping Containers Lesson (UK Geographical Association)
- <u>Transport and Logistics Teacher Resources</u> (UK Geographical Association)
- <u>The Sustainable Transportation Lesson Package</u> (Learning for Sustainable Future)
- EPA Transportation Alternatives Coloring Book
- NASA: Moving Cargo- Transportation Educator Guide
- Amazon Fulfillment Center Virtual Tour
- Amazon: Human and Robots Working together
- Behind the Scenes Tour of Robotics at an Amazon Fulfillment Center
- <u>Amazon: Driving to Combat Climate Change</u>
- <u>Amazon Scout Delivery Robot</u>
- <u>Amazon Drone Delivery</u>
- <u>Transportation Building Cards</u>
- STEAM Park Moving on Water Lesson
- <u>PBS Learning Media for students</u> (search "transportation")



